

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: W. Scott HEMPHILL

For: METHOD AND APPARATUS FOR REPAIRING CONCRETE

Serial Number: Not yet assigned

Examiner: Not yet assigned

Filing Date: Not yet assigned

Group Art Unit: Not yet assigned

Attorney Docket No.: 1367.003

Customer No.: 023907

**PRELIMINARY AMENDMENT ACCOMPANYING DIVISIONAL  
APPLICATION UNDER 37 C.F.R. 1.53(b)**

Commissioner of Patents  
Washington, DC 20231

Sir:

This preliminary amendment is directed to a divisional application of application Serial No. 09/439,650, filed November 12, 1999. Please amend the accompanying divisional application as follows:

**IN THE TITLE**

Change "METHOD AND APPARATUS FOR REPAIRING CONCRETE" to  
"APPARATUS FOR REPAIRING CONCRETE".

**IN THE ABSTRACT**

Page 19, line 2 change "A method and" to --An--.

IN THE SPECIFICATION

Page 1, after the title insert the following paragraph:

-- CROSS-REFERENCE TO RELATED APPLICATION

This application is a divisional application of Serial No. 09/439,650, filed November 12, 1999 and allowed July 27, 2001 --.

IN THE CLAIMS:

Please delete Claims 1-14.

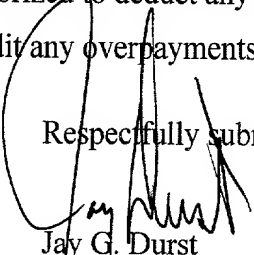
REMARKS

The specification has been revised to add a cross-reference to the parent application. The claims have been amended to cancel claims 1-14. Claims 15-31 remain in the application and are under consideration. A red-line/strike-out version of the amendments is attached.

It is believed that this application is in condition for allowance and such action is respectfully requested. Should the Examiner have any questions, he is requested to contact the undersigned at the telephone number appearing below.

The Commissioner is hereby authorized to deduct any additional fees arising as a result of this Preliminary Amendment or to credit any overpayments to Deposit Account No. 14-1080.

Respectfully submitted,

  
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Dated: 10/16/01

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Marked up version of the amendments:

On page 1,

~~METHOD AND~~ **APPARATUS FOR REPAIRING CONCRETE**

CROSS-REFERENCE TO RELATED APPLICATION

This application is a divisional application of Serial No. 09/439,650, filed November 12, 1999 and allowed July 27, 2001.

**BACKGROUND OF THE INVENTION**

**1. Field of the Invention**

The present invention relates to repairing concrete and, more particularly, relates to a method and apparatus for joining concrete sections together.

**2. Discussion of the Related Art**

Over time, cracks can develop within concrete structures which, if left unrepaired, can result in failure of the structure. To prevent such an occurrence without having to replace an entire slab, damaged slabs are often repaired by cutting a damaged section away from a preexisting concrete section, and by pouring new concrete in its place. However, new concrete does not always bond perfectly with the preexisting concrete, and cracks can propagate in the joint between the two sections.

Previous methods have been implemented to repair concrete structures and maintain the mechanical connection between a new concrete section and a preexisting concrete section. One repair method involves first removing defective concrete and drilling holes in the preexisting concrete using a rotary impact hammer drill. An adhesive is then placed into the holes, and reinforcing bars are inserted such that the bars extend beyond the outer wall of the preexisting concrete and are generally perpendicular

Marked up version of the amendments:

~~METHOD AND~~ **APPARATUS FOR REPAIRING CONCRETE**

**ABSTRACT OF THE INVENTION**

~~A method and~~ An apparatus for repairing concrete structures utilize a generally flat composite material insert. The insert is inserted into a slot formed in a preexisting section of concrete and bonded to the preexisting section using an adhesive. The insert is installed such that a portion of the insert extends beyond the preexisting structure and into a void where damaged concrete has been removed and where the new concrete is to be poured. The insert then functions to join the preexisting section and the new concrete section. Alternatively, the insert may comprise an extension to attach an external fixture to the concrete section. Alternatively, a slot can be created within two preexisting concrete sections, adhesive added to the slot, and an insert installed in the slot. Again, the insert functions to join the two concrete sections.